

## **SUPPLEMENTAL MATERIAL**

**Supplemental table 1** International Classification of Diseases (ICD) diagnostic codes, 8<sup>th</sup> and 10<sup>th</sup> edition

	ICD-8	ICD-10
<b>CHD</b>	746-747, except 746.99, 747.59, 747.69, 747.89, 747.99	Q20-Q26, except Q20.9, Q21.9, Q23.1A, Q24.6, Q24.9, Q25.9, Q26.1, Q26.5, Q26.6, Q26.9, Q27
<b>Other diseases</b>		
Atrial fibrillation or flutter	427.93-427.94	I48
Diabetes mellitus	249-250	E10-E14, G63.2, H36.0, N08.3
Extracardiac defects	310.40–310.41, 310.5, 311.40–311.41, 311.5, 312.40–312.41, 312.5, 313.40–313.41, 313.5, 314.40, 314.41, 314.5, 315.40–315.41, 315.5	Q00.0–Q99.9, except Q20-Q26
Heart failure	427.09, 427.10, 427.11, 427.19, 428.99, 782.49	I50, I11.0, I13.0, I13.2
Hypertension	400-404	I10-I15, I16.7
Stroke	431, 433-434	I61, I63-I64
<b>Outcomes</b>		
Alzheimer's disease	290.09, 290.10	F00 series (includes F00.0x, F00.1x, F00.2x, F00.9x), G30 (includes G30, G30.0, G30.1, G30.8, G30.9)
Vascular dementia	293.09, 293.19	F01 series (includes F01.0x, F01.1x, F01.2x, F01.3x, F01.8x, F01.9x)
Other dementias	094.19, 290.11, 290.18, 290.19, 292.09	F02 series, F03 series, F1x.73 series (includes F10.73 through F19.73), G23.1, G31.0, G31.1, G31.8B, G31.8E, G31.85
Diagnoses related to dementia (mild cognitive impairment and amnesic syndromes)	291.19	F04, F04.9, F05.1, F06.7, F06.7x, F1x.6 (F10.6, F18.6, F19.6)

Abbreviations: CHD, Congenital Heart Disease; ICD, International Classification of Diseases

**Supplemental table 2** Sensitivity analyses of the association between congenital heart disease (CHD) and risk of dementia.

	Number of dementia events		HR (95% CI)
	CHD cohort	General population cohort	
<b>Excluding all individuals with previously diagnosed mild cognitive impairments or amnesic syndromes</b>	-	-	1.62 (1.29-2.04)
<b>Alzheimer's disease, including unspecified dementias*</b>	81	832	1.61 (1.26-2.06)
<b>Additional adjustment for</b>			
Extracardiac defects <sup>†</sup>	95	977	1.56 (1.23-1.95)
Education <sup>‡</sup>	95	977	1.60 (1.28-2.01)
Acquired cardiovascular diseases or diabetes <sup>§</sup>	95	977	1.68 (1.33-2.11)
<b>Time of dementia diagnosis</b>			
Before 1994	5	70	1.25 (0.48-3.24)
Since 1994	90	907	1.64 (1.03-2.08)

Abbreviations: CHD, Congenital Heart Disease; CI, Confidence Interval; HR, Hazard Ratio

\* Including *International Classification of Diseases* code F03 (unspecified dementia) in the definition of Alzheimer's disease.

<sup>†</sup> Including syndromes and chromosomal abnormalities.

<sup>‡</sup> Highest completed education at 30 years of age: Basic (completion of primary education), moderate (completion of 3 years of secondary education known as gymnasium or completion of 3-4 year vocational programs after primary education), or advanced (completion of university education).

<sup>§</sup> At least one of the following diagnoses at any time: Atrial fibrillation or flutter, diabetes mellitus, heart failure, stroke, and hypertension.